

PALMAE MALESICAE—XIV

The Species of *Plectocomia* in Malaya

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THE genus *PLECTOCOMIA*, like *Korthalsia*, *Plectocomiopsis* and *Myrialepis*, comprises a group of climbing palms which end their vegetative growth by producing flowers and fruit borne in a terminal panicle. In the flowering-stages, however, *Plectocomia* species are easily separated generically by their large, non-tubular, cymbiform, spathels which cover the spikelets; in young stages of the inflorescence, these spathels are conspicuously imbricate and curl round the axis so as to make the spikes resemble tail-like structures. The side branches of the whole panicle are in the axils of somewhat reduced leaves, and each branch may bear several secondary branches. The spikelets which are produced in the axils of the spathels, represent tertiary branches, and are shorter than the respective spathels. Male and female flowers are always produced on separate plants; while the flowers in the female are solitary at each notch or pedicel on the spikelet, the flowers in the male plant are always in pairs. The fruit scales are comparatively small and in some species including the one that occurs in Malaya, these scales have a free soft end which makes the fruit squarrose. The seed albumen is homogeneous and the embryo is basal.

Sterile plants might be easily confused with those of *Plectomiopsis* and *Myrialepis*, since the leaves in all these genera have a petiole which is neither gibbose, nor flagellate, and which do not usually produce a conspicuous ocrea (ocrea is present in *P. Corneri*); the leaflets too are somewhat similar and have thickened margins. However, the small scales which are present in the lower surface of the leaflets in the other two genera, are absent in the leaflets of *Plectocomia*. Further the stems which are apparently tufted in all the species of *Myrialepis* and *Plectocomiopsis*, appear to be solitary in *Plectocomia*; sometimes the stems in the last mentioned genus produce bulbils or branches near the base, but these apparently do not grow so as to

make the plant tufted. Further observations are however necessary to see whether this phenomenon which has been observed on plants growing in the Botanic Gardens, Singapore, is true also in the wild state.

Herbarium specimens of this genus are not well represented in many herbaria, and so collectors should be warned to collect as complete material as possible, together with the notes about the habit of the plant in the field.

Distribution and Sections

Beccari in his monograph (1918) describes twelve species of this genus, and divides them into two groups. An examination shows that these groups are valid as sections. Hence I have named these as follows: *Campanulatae* and *Explanatae*, according to whether the fruiting perianth is campanulate or explanate. The following are the diagnostic characters:

I. CAMPANULATAE Furtado sectio nov.

Calyx masculus campanulatus vel cyathiformis; calyx femineus in floribus ovoideo campanulatus, coriaceus, basin versus obconicus, solidus, incrassatus. Perianthium fructiferum obconicum, subpedicellatum vel conspicue pedicellatum.

Species of this section are found in the Lower Burma, Malaya, Sumatra, Java, Borneo and the Philippines. The only species that occurs in Malaya belongs to this section.

II. EXPLANATAE Furtado sectio nov.

Calyx masculus minimus, trigonus vel 3-dentatus; calyx femineus gracilis, cartilagineus, cupularis, haud basi incrassatus. Perianthium fructiferum explanatum.

Members of this section are found apparently in colder and less damp regions than those of the *Campanulatae*: viz., Sikkim, Khasia, Upper Assam, Siam, and Indo-China.

Species

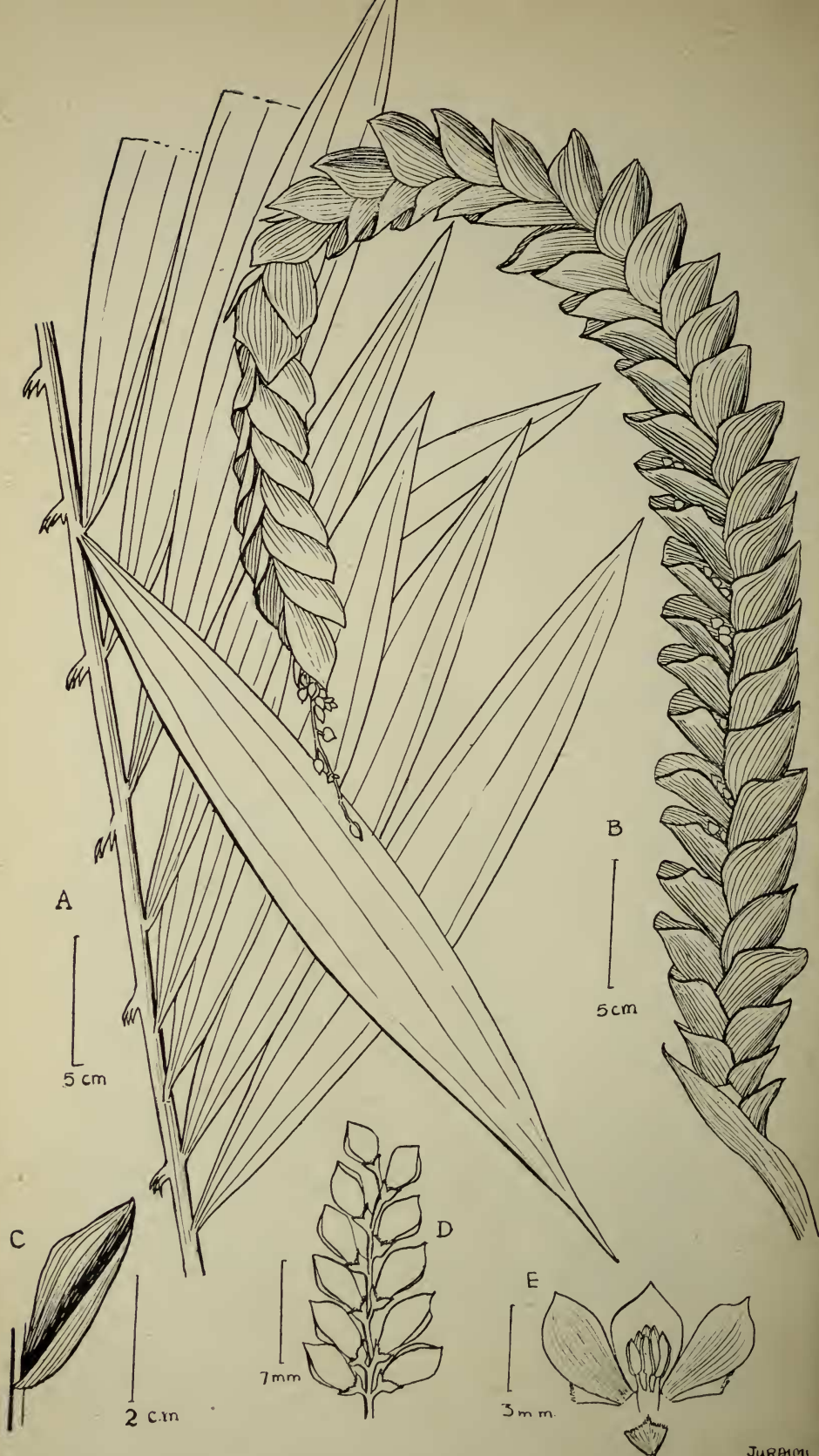
Plectocomia Griffithii Becc. in Hook. f., Fl. Brit. Ind. VI (1893) 478; Ridl., Mat. Fl. Mal. Pen. II (1907) 220; Becc. in Ann. Roy. Bot. Gard. Calc. XII, 2 (1918) 27; Ridl., Fl. Mal. Pen. V (1925) 70. (Figs. 17 and 18).

P. elongata Mart. et Bl. sensu Griff. in Calc. Journ. Nat. Hist. V (1844) 96 et in Palms Brit. Ind. (1850) 104 t. 217 A, B, and C; Hook. f., Fl. cit. VI (1893) 479; Ridl., Mat. cit. (1907) 220 omnino pro parte.

Stem solitary, about 30 m. long, with sheaths 5-7 cm. in diam. *Leaf-sheaths* without any trace of ocrea, obliquely truncate, covered with white powder when young, armed along the dorsum with a line of groups of spines laterally confluent at base, with fine brittle points. *Leaves* large, and end in a large long clawed cirrus; claws stout with a swollen base; petiole short stout, nearly 30 cm. long or less (very much longer in juvenile leaves), armed dorsally with binate claws; pinniferous part 2-3 m. long, armed with 1-2-nate claws in the lower half, and more digitate claws disposed in a half-whorl in the upper half. *Leaflets* in distant groups of 2-4 on each side of the rachis, all in one plane, narrow lanceolate, gradually acuminate, subulate at apex, callused in the axils, green above, paler or whitish beneath, 3-costate, provided with many slender nerves between the costae, smooth or spinulose in the margins; the largest leaflets mesial, 50-70 cm. long, 3-6 cm. broad. *Inflorescence* a terminal panicle with side branches arising from the axils of reduced leaves; male and female, though similar, produced on different plants, but spathels in female spadices slightly longer than in the male; each primary branch 1-2 m. long, composed of several pendulous secondary branches (spikes), each arising from the axil of a primary spathe; this last tubular, funnel-shaped, obliquely truncate at apex, 5-10 cm. long; spikes about 60-90 cm. long with its axis terete, 3-4 mm. in diam., rusty pubescent, bearing alternately and distichously numerous spathels (secondary spathes), about 8-10 mm. apart; when young, spathels are imbricate and folded round the axis so as to appear tubular, later spreading or porrect, cymbiform, 3-6 cm. long, 3-4.5 cm. wide, from the broadest in the middle narrowed on both sides concavely towards the apex and convexly towards the base where they are almost amplexicaul, striately veined, glabrous, sprinkled with minute reddish scales more in the upper half than in the lower. *Female spikelets* 5-9 flowered with rusty scabrid axis, each flower provided with a short rusty scabrid, 5 mm. pedicel having a 5-6 mm. triangular subulate bracteole at the base; calyx campanulate, slightly narrowed at base, 8 mm. long, 5-6 mm. wide, shallowly divided into 3 acute teeth; corolla twice as long as the calyx, lobes 2-3 mm. broad; staminodes shorter than the corolla. *Fruits* 3-5 on each spikelet, globular, 15-16 mm. in diam. (fide Beccari), bearing stigma bases at apex, densely villous with narrow, upturned or spreading, rufous, membranous scale tips; scales small dark chestnut brown in colour, arranged in numerous vertical series; seed globular-depressed, 11 mm. long, 9 mm. broad, 7.5 mm. thick (fide Beccari); fruiting perianth subpedicelliform. *Male spikelets* 2-3 cm. long, with hairy scabrid axis, bearing alternately 5-6 pairs of flowers on each side, the lowest pair or two being pedicellate, others sessile; flowers both male in each pair, 5-6 mm. long, 4 mm. broad.

MALAYA: *Penang*, Government Hill (Curtis 1669 and 2436); *Penang Hill* (Ridley 7,098). *Malacca*, loc. incert. (Alvins 656 and 695). *Singapore*, Selitar (Ridley 1,665; sn.); Kranji (Ridley in 1906); Bukit Mandai (Ridley 3,470, as *Rotan Dahan*).

I have not seen any fully matured fruit of the species, so that the size given for fruits and the description of the seed are quoted from Beccari (1918).



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Fig. 17. *Plectocomia Griffithii* ♂ (Curtis 2,436).

A, Fragmentum frondis. B, Spadicis ramus. C, Spathella. D, Spicula ♂ ex axilla spatheellae. E, Flos ♂, segmenta perianthii resecta ut staminum insertio appareat.

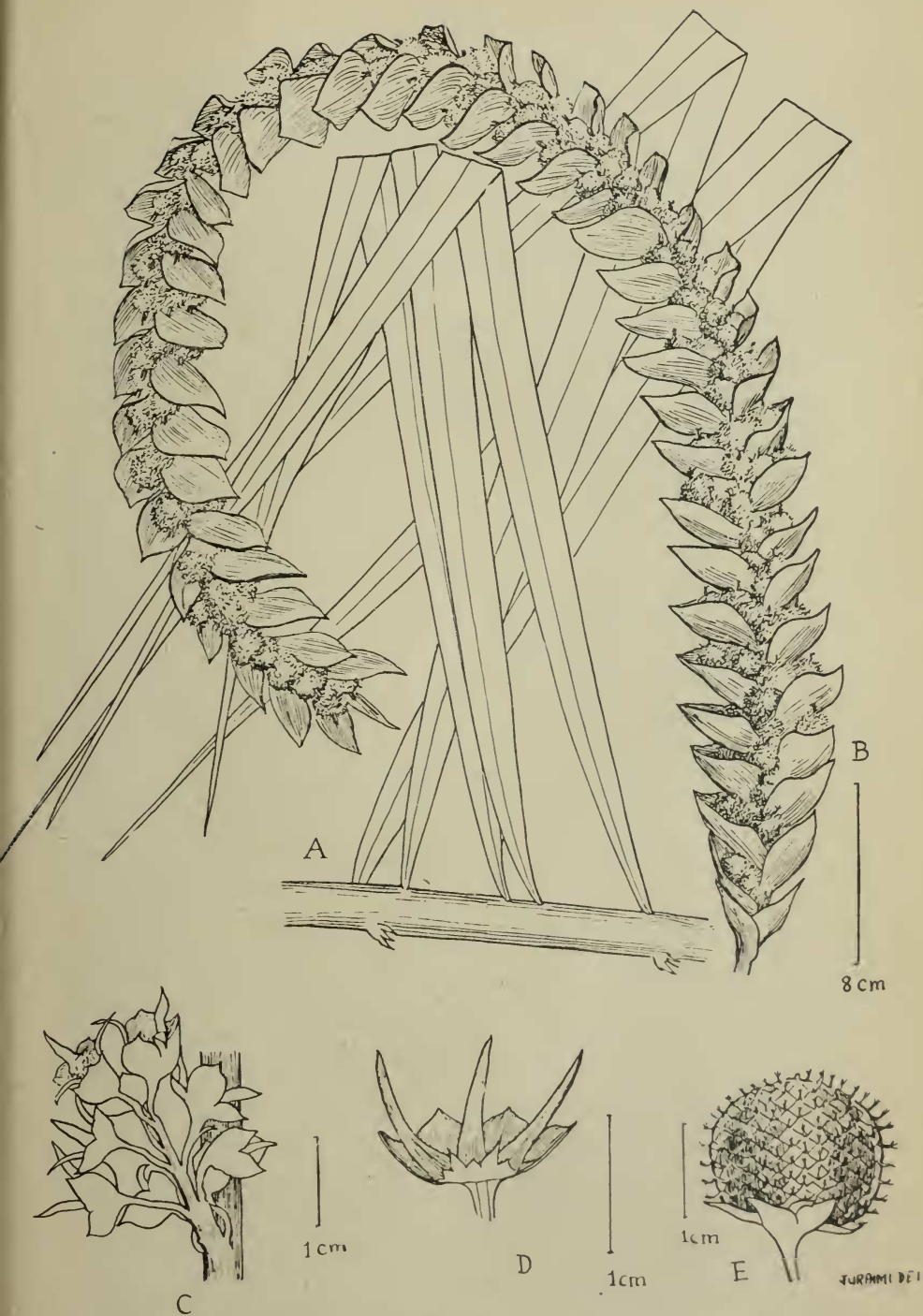


Fig. 18. *Plectocomia Griffithii* ♀ (Alvins 656).
 A, Frondis pars. B, Ramus spadicis ♀. C, Spicula ♀, spatella axillante abscissa.
 D, Juvenilis perianthium fructus. E, Fructus juvenilis.

The Singapore specimens cited above and *Curtis* 2346 and 1669 from Penang are all male specimens and have male flowers which are much smaller than the flowers found on plants growing in Gardens Jungle, Singapore, of which Beccari (1918) gave a description in the remarks under *P. Griffithii*. The Gardens' plant may be an escape of one of the introduced plants or may be a hybrid. I have excluded the Gardens' plants from this species.

The stem in this species is solitary, though one notices occasionally small bulbils or branches near the base which grow to a certain extent, but never big enough to make a stem tufted; apparently these branches die off when the species flowers and dies.